



Conservation Designation: ??? Ballyteige Burrow pNHA 000696,
proposed extension to SPA 4020 ???

General description:

Ballyteige drainage channels are situated on the south coast of Wexford, 1 km to the west of Kilmore Quay. The drainage channels are artificial and were excavated to drain a lagoon and saltmarsh which were isolated behind an extensive dune system to the south and a sea wall to the west, constructed across the Cull Inlet in the mid 19th Century. Seawater enters by percolation through the dunes along the southern shore and apparently by leakage of the sluice on the Cull at high tide. It is also possible that seawater enters from the tidal river that runs from Duncormick to Bridgetown. Area of water about 5 ha., length of channels 3.2 km., maximum depth 3m.

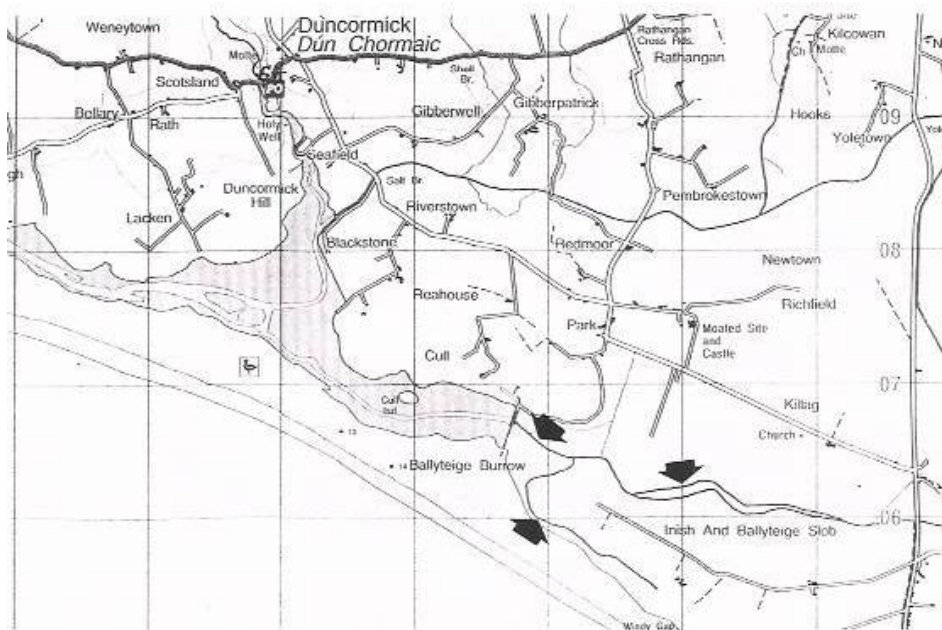


Figure 8.1 Location of map of Ballyteige channels.

Ballyteige drainage channels were surveyed in 1998 for vegetation (Roden 1999), aquatic fauna (Oliver 1999) and ecotonal coleoptera (Good 1998, Good & Butler 2000). Results of these surveys are summarised by Healy (1999a,b; 2003).

Stations used for faunal sampling are not necessarily the same as those used for vegetation or ecotonal coleoptera.

Flora

The vegetation of Ballyteige channels was surveyed by C. Roden in 1998. A total of 11 taxa were recorded, including two lagoonal specialists. A rare charophyte, *Chara canescens*, was recorded here previously but was not found on this occasion.

Floral taxa recorded by Roden in 1998:

Chaetomorpha linum

Enteromorpha intestinalis

Enteromorpha ralfsii

Vaucheria sp.

Myriophyllum spicatum

Phragmites australis

Potamogeton pectinatus

Ranunculus baudotii

Ruppia maritima

The *Ruppia* occurred in a form approaching the *brevirostris* variety (Preston 1995).

Enteromorpha ralfsii was only provisionally identified.

Scirpus maritimus and *Schoenoplectus* were recorded by Oliver (1999).

Chaetomorpha linum. There is some doubt about the taxonomic status of the unattached lagoonal form of this species, and it was recorded by Hatch and Healy (1998) as *C. mediterranea*. It is a common, characteristic alga of semi-isolated Irish lagoons, recorded at 49 of the 87 (56.3%) lagoons surveyed.

Ruppia spp. are the most characteristic aquatic plant taxa of Irish coastal lagoons. The species are hard to distinguish when not flowering, and remain uncertain at some sites, but *Ruppia* of one species or the other (*R. maritima*, *R. maritima* var *brevirostris*, *R. cirrhosa*) was found at 62 of the 87 lagoons (71.3%) surveyed, and is one of the most useful indicators of coastal lagoon status (*R. maritima* at 41, *R. cirrhosa* at 22 sites).

Ruppia maritima appears to be the more common of the species and was found at 41 of the lagoons surveyed. *Ruppia cirrhosa* is believed to tolerate higher salinities than the former species and to be less common, but neither of these statements is clearly supported in Irish lagoons and the two species were often found growing together.

None of the other plants recorded are of any special interest.

Fauna

Five stations were selected for faunal sampling in 1998 (Table 8.1, Figure 8.2). A total of 61 faunal taxa were recorded in 1998 together with some additional records from 1996, of which 50 were identified to species.

Eight of these species are listed as lagoonal specialists in Britain (although one is a record from 1991) and a further 2 species (*Notonecta viridis* and *Plea leachi*) are proposed as lagoonal specialists in Ireland. The former was not identified positively during this survey but was previously recorded by Galvin (1992) at this site and it is assumed that both records are of the same species.

Table 8.1 Positions of sampling stations in Ballyteige channels, with sampling date, salinity, depth of water and type of substratum.

	Station 1	Station 2	Station 3	Station 4	Station 5
GPS position	S 93772 06894	S 93772 06703	S 93883 06019	S 94754 05631	S 96785 06003
Sampling dates	5-7/10/96	5-7/10/96	5-7/10/96	5-7/10/96	5-7/10/96
Salinity (psu)	0 (4)	28.4	18-31	0.2	7.4-27.7
Depth (cm)	0-100	0-300	0-50	0-100	0-100
Substratum	Deep organic silt	Sand, silt, occasional stones	Anoxic silty sand	gravel.	Deep organic silt

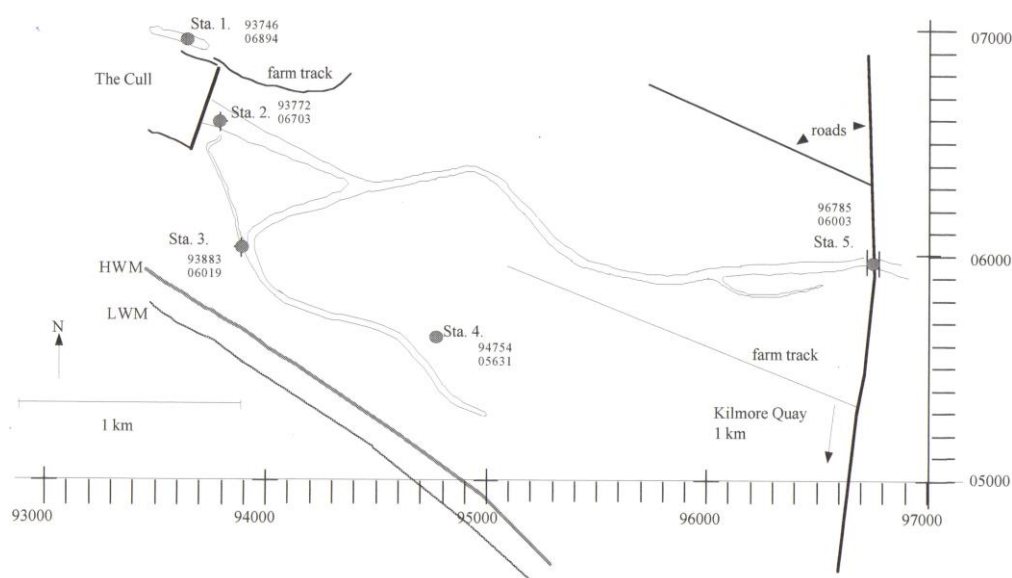


Figure 8.2 Sampling stations Ballyteige channels

The taxa recorded show a wide range of ecological groups from marine to limnetic reflecting the varied habitats of the area which ranged from very low to high salinities and from gravel to soft sandy substrates. This site really is a complex of lagoonal habitats.

Lekanesphaera hookeri is a common lagoonal isopod crustacean, found at 37 of the 87 lagoons surveyed (42.5%).

Palaemonetes varians Decapod crustacean listed as a lagoonal specialist in the U.K. by Barnes (1989) and Bamber (1997), but apparently is no longer regarded as such. Although found in estuaries, this species appears to be far more characteristic of lagoons in Ireland, found in 64 of the 87 lagoons surveyed (73.6%) and may require a lagoonal environment for reproduction. Therefore, it remains on the proposed list of lagoonal specialists for Ireland.

Notonecta viridis Hemipteran insect (back-swimmer) recorded on the east coast at Kilcoole, on the south coast at North Slob, Lady's Island L., Tacumshin L., Ballyteige, Clogheen/White's Marsh and Kilkeran L. and also on the west coast at Reenydonegan, Co. Cork and L. Donnell, Co. Clare. A rare brackish water species in Ireland.

Table 8.2 Faunal taxa recorded at stations in Ballyteige channels on 5-7/10/98.

L.T. = Light trap, r = rare, o = occasional, c = common, a = abundant . Species in bold text are lagoonal specialists or rare species.

Taxa		Stations							
		1	2	L.T. 2	3	L.T. 3	4	5	L.T. 5
Nemertea					a				
Annelida	Polychaeta				a				
					a				
					a				
				a	c				
	Oligochaeta				a				
					+				
					o				
					o				
					a				
Crustacea	Ostracoda	a							
	Copepoda	a							
	Mysidacea			1					
								o	
	Isopoda			c	2			a	35
	Amphipoda			+					
				+					
				+	a			+	1
				+					
	Decapoda			+					
				o					
				o	1			o	
Acarina		c							
Insecta	Ephemeroptera	1							
	Odonata	a	+	1			+		
	Trichoptera	o							
	Heteroptera	1							
		a							
		2							
		o							
		3							
		o							
		c					o		
		a							
		c							
		1							
		a						c	c.40
	Coleoptera	9	2				2		
		(c)							
		c							
		(4)							
			2						
		(1)							
		2							
		4							
		2							
							1		
							1		
	Diptera	a							
Mollusca	Prosobranchia		+	1					
			+						
			+						
		(a)	o					o	
	Pulmonata	c							
		c						c	
	Bivalvia	1				+			
Echinodermata						c	4		
						c			
Bryozoa			+						
Pisces						1			
		c	a	25	c	6		a	113
			a	12	a	3			

According to Southwood and Leston (1959), it was recorded only for Wexford and North Kerry. Recorded previously in Lady's Island L (Healy *et al.* 1982) in Lady's Island L. and the North Slob by Galvin (1992) and from the Dingle Peninsula by McCarthy and Walton (1980). *N. viridis* is found at inland sites in the U.K. but appears to be largely restricted to lagoons in Ireland, and was proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998).

Plea leachi has been recorded ALSO from Tacumshin and The North Slob (Co. Wexford) and from Kilcoole (Co. Wicklow) and curiously from two sites in Galway (Dorus Lakes, Loch an Chaorain). Recorded previously from Tacumshin and Ballyteige (Galvin 1992). Otherwise appears to be rare, but is small and could be overlooked. Halbert (1935) recorded it from L. Gill (Co. Kerry) and described it as widespread, but local, usually "in stagnant water near the coast". Proposed as a lagoonal specialist for Ireland.

Sigara stagnalis Hemipteran insect (water-boatman). A common lagoonal specialist found at 36 of the 87 (41.4%) lagoons surveyed.

Agabus conspersus Water-beetle listed by Barnes (1989) and Bamber (1997) as a lagoonal specialist in the U.K. but is no longer regarded as such. This species remains on the proposed list of Irish lagoonal specialists until more is known of its status and ecology in Ireland. Identified from samples collected at Ballyteige and the North Slob by Galvin in 1991 and previously recorded in Lady's Island L. by Healy (1997). One specimen was taken at an unsurveyed site near Garretstown, Co. Cork in 1998. This brackish water species appears to have become rare and there are only two other recent Irish records: from a salt marsh in Co. Meath, and at Dundalk harbour, Co. Louth (Nelson *et al.* 1997).

Enochrus bicolor Water-beetle recorded at 12 lagoons of the 87 surveyed, from the southern half of the country from Co. Wicklow to Connemara including the Aran Islands. There are only two recent records from N. Ireland (Nelson *et al.* 1998).

Megasternum obscurum Water-beetle recorded at Ballyteige, Co. Wexford, and L. an Chara and L. an tSaile, Co. Galway and at Furnace L., Co. Mayo, but is otherwise described as rather rare in Ireland (Foster *et al.* 1992).

Rhantus frontalis is described as somewhat rare and local in Ireland (Foster *et al.*, 1992).

Rhantus suturalis Water beetle recorded only from Tacumshin and Ballyteige, Co. Wexford. Apparently a southern species which occurs in Ireland only sporadically (Foster 1981).

Conopeum seurati Bryozoan recorded at 49 of the 87 lagoons surveyed (56.3%), but is not listed in a recent review of Irish marine Bryozoa (Wyse Jackson 1991). Either the species is under-recorded or is truly a lagoonal specialist.

In general, the other species recorded are not particularly unusual except for the community of *Amphipholis squamata*, *Leptosynapta inhaerens* and the dense population of annelids in the seepage area at Sta. 3.

The aquatic fauna is surprisingly rich with a large number of lagoonal specialists and based on this fauna, the site is rated as of **high conservation value**.

Ecotonal coleoptera

In total, eight species of carabid and twenty one species of staphylinids were recorded in 1998 (Good, 1998, Good & Butler 2000), none of which are regarded as indicator species. Based on ecotonal coleoptera, the site is therefore rated as of **no conservation value**.

Summary

The channels are totally artificial but are the remnants of a previously extensive lagoonal system lying behind a sedimentary barrier. The flora is not particularly interesting but two species are lagoonal specialists, and a rare charophyte, *Chara canescens* was recorded in 1991. The fauna is more interesting and diverse with 61 taxa recorded, including 10 lagoonal specialists and several rare species. One of the greatest interests in the area is the potential for restoration and creation of lagoonal habitats. Overall conservation value is rated as moderate.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

Impacts	Moderate eutrophication from surrounding farmland. Poaching by cattle
Conservation Status	Unfavourable- Inadequate

Further Information

Fauna was surveyed by Galvin (1992). Listed as a lagoon by Healy *et al.* 1997. Surveyed in 1998 for vegetation (Roden 1999), aquatic fauna (Oliver 1999) and ecotonal coleoptera (Good 1998, Good & Butler 2000). Results of these surveys are summarised by Healy (1999a,b; 2003). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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